REMARKS

Applicant presents the foregoing amendments to the claims following the final Office Action dated November 19, 2009 ("Office Action").

In the final Action, the Examiner admits that "Bright [USP 4,072,129] fails to [*sic* disclose] an electric field in the housing." *Office Action*, p. 5, ¶ 17. Accordingly, the Examiner cites to U.S. Patent No. 6,320,148 to Yoon et al. as disclosing an "apparatus for charging and separating particles." Specifically, the Examiner cites to Figure 2 and col. 4, lines 39-45 of Yoon to support the contention that the device "utilizes an electric field from a power source 4 to ***charge*** conducting particles in the powder while non-conducting particles are charged via tribo electrification . . ., hence efficiently charging more particles." *Id.*

Firstly, the passage cited by the Examiner does not support the contention that an "electric field" charges the conducting particles. Rather, what Yoon et al. teaches is that conducting particles 8 may acquire their charges "***by conduction***" with the bottom electrode 2, which is charged. Hence, there is no evidence that any "electric field" in Yoon serves to "charge" particles. Instead, the electric field in Yoon is used for separating particles in the conventional manner.

Secondly, nothing in terms of evidence in the record establishes that the use of a power source 4 in the manner proposed in Yoon et al. serves to "efficiently charge more particles." Rather, this statement is purely based on speculation, which cannot form a proper basis for a finding of obviousness. *In re Warner*, 54 C.C.P.A. 1628, 1635 (C.C.P.A. 1967) ("The Patent Office has the initial duty of supplying the factual basis for its rejection. ***It may not, because it may doubt that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis***. To the extent the Patent Office rulings are so supported, there is no basis for resolving doubts against their correctness. Likewise, we may not resolve doubts

in favor of the Patent Office determination when there are deficiencies in the record as to the necessary factual bases supporting its legal conclusion of obviousness.") (emphasis added). In this regard, Bright et al. specifically explains that "[t]he advantages of the invention derive partly from the ***high efficiency of the charging process***," so there would be no reason for any improvement to "efficiently charge more particles," which is already the result of using Bright's apparatus. Furthermore, it is noted that Bright actually provides structure to control the air/powder output ratio for purposes of creating the desired amount of spray, so charging "more particles" is not necessarily required or desirable for proper or "efficient" operation.

Thirdly, the Examiner fails to cite any reason having a rational underpinning for combining the teachings of the Bright and Yoon references. The alleged reason the combination would be obvious is "to charge more particle." *Office Action*, p. 6, line 1. Aside from being merely conclusory, this statement is simply a possible result of the combination, rather than a reason for providing an electric field in the chamber of a rotor. The absence of such a proper reason articulated in the record means a *prima facie* case of obviousness is lacking. *See KSR Int'l Co v. Teleflex, Inc.*, 127 S.Ct. 1727, 1742 (2007) (citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness")).

Fourthly, the Examiner fails to reconcile the fact that Bright is concerned with tribocharging powders comprising polymer materials (resins, including epoxy, and nylon powders). Nothing establishes that such polymer materials (which are typically insulators) would be effectively charged as the result of conduction in the manner proposed by Yoon et al. by using a power source 4.

Finally, the Examiner disregards the express teaching away from the proposed combination in Bright. This reference specifically notes that tribocharging in the manner proposed avoids "the need for . . . a high voltage generator." (*see* col. 1, lines 11-12). Accordingly, a skilled artisan encountering this reference would be disinclined from making the combination proposed by the Examiner to incorporate any voltage generator into the disclosed device, and the combination of references is therefore improper. MPEP §2145 ("[i]t is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983).").

Indeed, none of the references proposes an electric field in combination with a chamber including a tribocharging rotor. The Examiner does not contend otherwise, or point to any disclosure that would support the finding that this invention when considered as a whole would be obvious to a skilled artisan. Accordingly, the amended claims as presented above distinguish over all references of record.

For claim 5, it is contended that it would have been obvious to use the partition 50 of Stencel in the Bright device "to enhance charging/separation efficiency." The difficulty is that Bright is not a separator, and the Examiner provides no reason as to why putting an obstacle in the chamber of Bright would "enhance" charging efficiency for a device that is already described as being "highly efficient." Aside from constituting speculation, this alleged "reason" is nothing more than the "mere conclusory statement" that precedential decisions hold cannot sustain a *prima facie* case of obviousness.

For claim 10, it is specifically noted that it requires that "the electric field is created by a variable voltage source having a first lead connected to the rotor and a second lead connected to a wall of the chamber." Nowhere in any of the cited references does the Examiner identify this invention "as a whole," as is required for a proper rejection under Section 103 of the Patent Act. Furthermore, the rejection does not

articulate a reason for combining the references in the manner proposed. Accordingly, a *prima facie* rejection is lacking with respect to claim 10, and its allowance is in order.

Finally, Applicant presents new claim 34, which requires that the outer surface of the rotor is smooth and continuous; new claim 35, which requires that the rotor is cylindrical; new claim 36, which requires that the rotor is mounted to spin about a horizontal axis; and new claim 37 requiring a rotor without blades. Support for these claims is provided by the specification at *inter alia* paragraph 22 and in Figures 1 and 4c.

Upon review, it is believed the Examiner will agree that all claims patentably distinguish over the art of record and should be allowed. To the extent questions remain, the Examiner is invited to call the undersigned representative. ***If any fees are due, the undersigned authorizes their deduction from deposit account number 11-0978.***

Respectfully submitted,

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